

County of San Diego Multiple Species Conservation Program

Quino Checkerspot Butterfly Amendment

Summary of Proposed Conservation Policies

1.0 Introduction

This report provides (1) a summary of the project processing procedures that are proposed in the draft Quino Checkerspot Butterfly (Quino) Amendment (Quino Amendment) and (2) an analysis of anticipated conservation levels. By providing a concise summary of these critical issues, this report will facilitate review by staff, analysts, consultants, property owners, and Wildlife Agency representatives. It is assumed that reviewers of this report have prior knowledge about the County of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan (County Subarea Plan) and the Quino Amendment.

Major components of the Quino Amendment that are not discussed in this report, but will be addressed in the future as follows:

- **Management and Monitoring (Adaptive Management):** A group of independent scientists prepared a report (Longcore *et al.* 2003) that provides adaptive management recommendations for Quino populations within the County Subarea Plan. Based upon the recommendations in the report, a Quino Management and Monitoring Plan is being developed. A summary of this plan will be available for review soon.
- **Financing of Management and Monitoring:** There is an existing management and monitoring program being implemented within the County Subarea Plan that will provide numerous benefits to Quino populations. Funding for this program comes from multiple sources (see County Subarea Plan). However, to ensure the success of the Quino Amendment, additional management and monitoring actions will be necessary. As the Quino Amendment Management and Monitoring Plan is developed, the County of San Diego is assessing the additional costs that will be necessary and identifying funding mechanisms.
- **Effects of the Quino Amendment on other Species:** The Quino Amendment proposes minor changes to the existing MSCP preserve system. Specifically, modifications are being proposed to the Otay Ranch Village 13 area. The effects of these modifications will be analyzed in the Quino Amendment and associated environmental documents to ensure that the ecological benefits provided by the MSCP preserve system are not diminished.

To concisely present the conservation levels and impacts proposed by the Quino Amendment, the following items are discussed in this report:

- **Section 1 - Introduction:** Describes the goals of the Quino Amendment and provides important definitions.
- **Section 2 - Baseline Quino Habitat and Population Conditions:** Discusses the general distribution of Quino populations and Quino habitat.
- **Section 3 - Project Processing:** Discusses the general project processing procedures related to Quino that will be implemented throughout the Subarea Plan.
- **Section 4 - Conservation Analysis:** Assesses the consistency of the proposed conservation levels with the overarching conservation goals.

1.1 Quino Amendment Goals

In general, the Quino Amendment will provide assurances for the long-term conservation of Quino within the County Subarea while allowing for public and private development consistent with the approved County Subarea Plan Implementing Agreement. Upon approval of the Quino Amendment, Quino will be included as a Covered Species Subject to Incidental Take under the County Subarea Plan. Such authorization is necessary because otherwise lawful activities associated with construction of public and private projects in the County Subarea will result in the modification and destruction of Quino habitat.

The Quino Amendment has two overarching goals:

- 1) Provide for the long-term viability of Quino within the Subarea and contribute to the recovery of Quino in the region through the conservation and adaptive management of Quino habitat; and
- 2) Improve regulatory certainty for development projects in order to facilitate development outside of Preserve areas.

These goals will be achieved by accomplishing the following objectives (objectives 1-4 are directly related to the discussion in this summary report):

- 1) Preserve a sufficient amount of occupied Quino habitat to ensure the long-term conservation of Quino in the Subarea;
- 2) Provide conservation of appropriate habitat (including habitat that is not currently known to be occupied) within a Preserve design appropriate to the metapopulation dynamics of the species;
- 3) Provide Take Authorization of Quino for both public and private projects;
- 4) Minimize regulatory burdens associated with federal Endangered Species Act compliance for Quino;
- 5) Provide an adaptive management framework that offers long-term management of key habitat constituents necessary for the persistence of the species, with new strategies implemented as additional information is learned;
- 6) Facilitate monitoring of the species and key habitat constituents to ensure long-term persistence of viable populations;
- 7) Provide necessary funding for a Preserve management program and biological monitoring of the Preserve; and
- 8) Ensure compatibility with the overall conservation goals of the MSCP for all Covered Species.

1.2 Definitions

- **Occupied Quino Habitat:** Occupied Quino Habitat shall be defined and mapped as follows (an example of mapped Occupied Quino Habitat is provided in Figure 1):
 - All natural lands within 200 meters (656 ft) of a Quino sighting (at a minimum).
 - Any additional natural habitat within 200 meters (656 ft) of a Quino sighting containing Significant Larval Host Plant Patches (defined below) with appropriate nectaring plants present.
 - Any additional natural lands within 200 meters (656 ft) of Significant Larval Host Plant Patches with appropriate nectaring plants present, until no additional significant patches are encountered.
 - Habitats to be excluded from extension beyond the 200 meter (656 ft) radius from Significant Larval Host Plant Patches include inappropriate Quino habitat or habitat beyond significant barriers to dispersal, including:
 - Closed canopy chaparral, upland forest, or riparian forest;
 - Dense deergrass meadows;
 - Dense non-native grassland where few host plants are present; and
 - Barriers such as solid fencing/walls over two meters tall, dense vegetation (ornamental or natural) over three meters tall, or buildings.
 - Portions of nearby hilltops or ridgelines that are likely to be used by Quino (e.g., are within 500 meters (1640 ft) of Significant Larval Host Plant Patch and consist of Potential Quino Habitat).
- **Potential Quino Habitat:** At the most general level, all vegetation communities with a potential to support Quino are considered Potential Quino Habitat. However, the potential of these vegetation communities to support Quino in different areas is further classified based upon the results of Quino surveys. (See Section 2.1 for a thorough description of Potential Quino Habitat and Figure 2 for a map of Potential Quino Habitat.)
- **Significant Larval Host Plant Patch:** An area within which a Quino larval host plant species covers at least four square meters and contains a density of at least 30 individual host plants per square meter in at least one part of the patch.
- **Suitable Quino Habitat:** To delineate Suitable Quino Habitat, the same process is followed as for delineating Occupied Quino Habitat (see above definition and Figure 1). However, rather than beginning habitat mapping at a Quino sighting, mapping begins at a Significant Larval Host Plant Patch where appropriate nectaring plants are present.
- **Viable Quino Habitat:** Quino habitat is considered “viable” if it is capable of maintaining normal ecosystem functions over the long term (50 years) that sustain Quino, based on the best available science as interpreted by a qualified County biologist (e.g., lands identified as Biological Resource Core Areas in the County Subarea Plan Biological Mitigation Ordinance). In order to make a determination that Quino habitat is not viable and may, therefore, be impacted within Quino Criteria Areas (see Section 3.3), concurrence from the Wildlife Agencies is required.

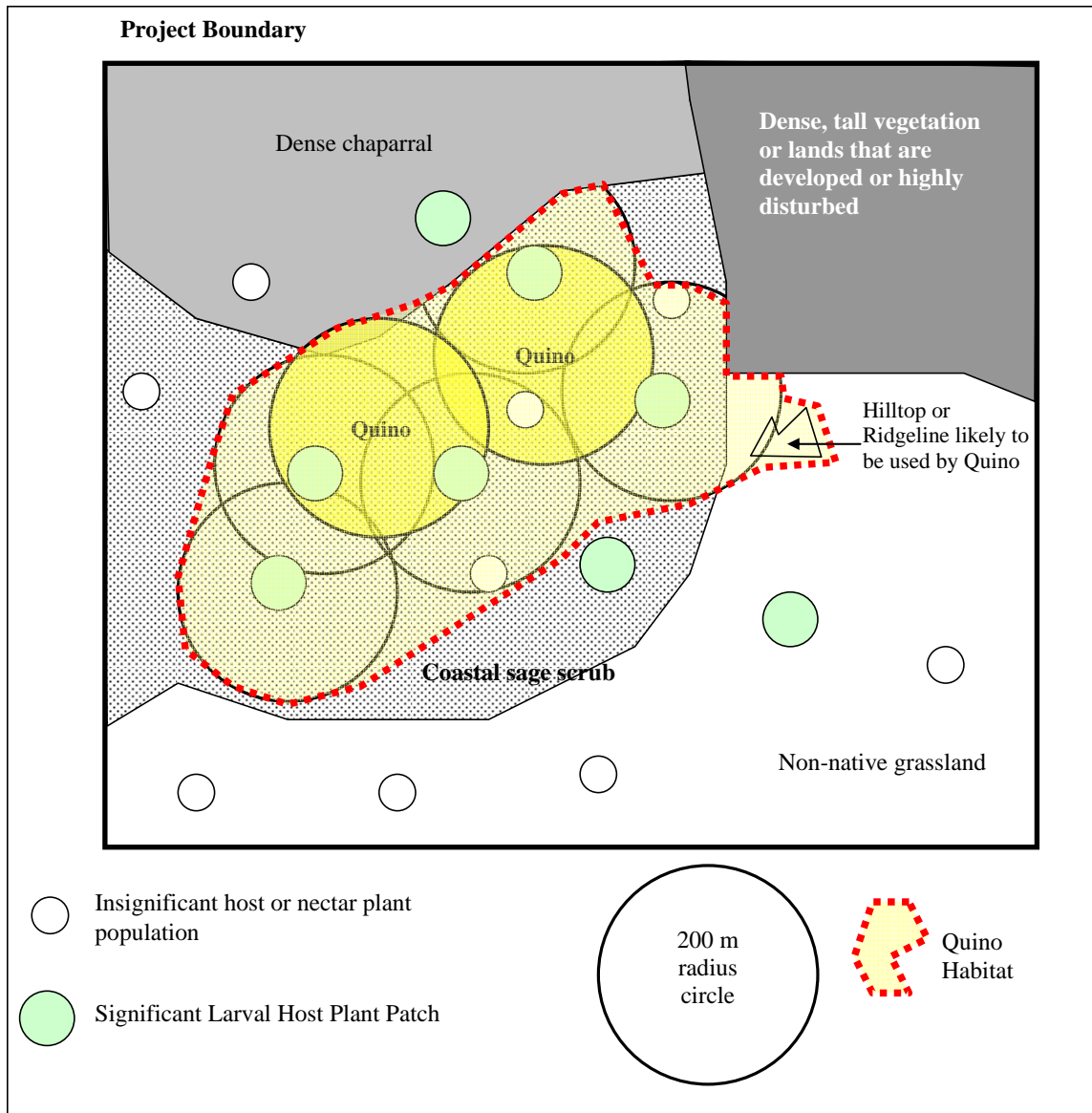


Figure 1. Example of Occupied Quino Habitat Mapping.

2.0 Baseline Quino Habitat and Population Conditions

Approximately 22,000 acres of the County Subarea have been surveyed for Quino. As a result, numerous Quino populations have been identified (Figures 2 and 3). In order to assess the suitability of habitats to support Quino in unsurveyed areas, a model was developed (i.e., the Potential Quino Habitat Model (Section 2.1)). Modeling of the potential of habitats to support Quino was necessary for the following reasons:

- Survey results are not available for all areas, and some of the available surveys were not conducted in accordance with established protocol; and
- Patches of suitable habitat that are unoccupied in one season may be occupied in another season, due to metapopulation dynamics.

The County and the Wildlife Agencies have worked together to assess the potential of extant habitat within the County Subarea to support Quino. Actual Quino habitat utilization under current conditions is typically limited to small patches and depends heavily on habitat quality, particularly related to the extent of non-native plant invasion. Furthermore, various anthropogenic activities have restricted the distribution of Quino in areas where this species would otherwise be expected to occur. As such, the total acreage of areas modeled as Potential Quino Habitat greatly exceeds the actual extent of currently occupied habitat or areas that are likely to support Quino in the future without significant habitat enhancement. It should be noted that an over-estimation of Potential Quino Habitat typically would occur throughout the Subarea (e.g., it is likely that over-estimation of Potential Quino Habitat in the Preserve is roughly proportional to over-estimation of Potential Quino Habitat outside of the Preserve). Where available, detailed habitat assessment and survey information has informed the decision-making process. In addition, this Amendment provides for further habitat assessment and survey requirements on a site-specific basis where appropriate.

2.1 Potential Quino Habitat Model

To assess the suitability of different areas to support Quino, a Potential Quino Habitat Model was developed. Only areas with habitat types generally considered capable of supporting Quino were considered in the model. Habitat types considered to have the potential to support Quino (i.e., Potential Quino Habitat) are limited to the following:

- Coastal sage scrub (including Flat-topped buckwheat scrub);
- Maritime succulent scrub;
- Chaparral;
- Coastal sage scrub/chaparral ecotone;
- Grassland;
- Vernal pool; and
- Agricultural lands that have been acquired for conservation and are no longer in agricultural use (i.e., are recovering their habitat values).

Although dense-canopy chaparral is not generally considered to have the potential to support Quino, all chaparral habitats have been included as Potential Quino Habitat because available mapping does not consider vegetation density and features such as fire breaks or dirt roads, which could provide patches of suitable habitat. Many Quino observations have been made in habitat largely mapped as chaparral, but which has been opened up by grazing, fire breaks, and dirt roads.

The assessment of potential habitat was based, overall, on vegetation mapping that was conducted to support development of the MSCP in 1995. This was, however, updated by 1) refining the vegetation data when more current survey data is available and 2) reclassifying newly developed areas as “developed.”

Areas of Potential Quino Habitat have been assigned Classes A through C, with A representing the highest relative potential for Quino and C representing the lowest. This categorization takes into account survey results between 1999 and 2006. However, negative survey results from 2002 were not considered, as it was a relatively poor survey year for Quino. Proximity to known Quino locations was based on a one-kilometer (0.6 mile) radius. This radius was selected because data from mark-recapture studies indicate that dispersal greater than this distance is rare in checkerspot butterflies (USFWS 2003). Based upon known Quino observations and negative survey data, the following classes were assigned to Potential Quino Habitat within the Subarea:

- **Class A** includes all Potential Quino Habitat within 1 km of a known Quino location (1999 to 2006).
- **Class B** includes Potential Quino Habitat with no known 1999, 2000, 2001, 2003, 2004, 2005, or 2006 protocol survey, outside 1 km of a known Quino location.
- **Class C** includes Potential Quino Habitat with a negative 1999, 2000, 2001, 2003, 2004, 2005, or 2006 protocol survey, outside 1 km of a known Quino location. In many areas, negative survey results have been trumped by the subsequent detection of Quino in the same area.

2.2 Current Habitat Conditions

The total acreage of Potential Quino Habitat includes approximately 31,499 acres (20 percent) in Class A, 115,571 acres (73 percent) in Class B, and 10,696 acres (seven percent) in Class C, (Table 1, Figure 2). Class A habitat is restricted to the South County, Alpine-Jamul, and San Vicente Quino Management Units (QMU) where Quino were observed during 1999 or later. Most of these observations were in the southern part of the County, with a smaller number of observations in Alpine and northwest of the San Vicente Reservoir.

Table 1. Potential Quino Habitat within Each Quino Management Unit (in acres).

Model Class	Quino Management Unit					Total
	Lake Hodges	San Pasqual	San Vicente	Alpine-Jamul	South County	
A	0	0	1,449	1,997	28,053	31,499
B	3,337	7,300	30,100	37,246	37,588	115,571
C	3,091	121	4,451	1,088	1,944	10,696
Total Potential Habitat	6,428	7,421	36,000	40,332	67,585	157,766

A large amount of the Potential Quino Habitat falls into Class B, as a large portion of Potential Quino Habitat is not in close proximity to a known Quino observation and has not been the subject of Quino surveys. This reflects the current uncertainty about the potential of many areas to support Quino.

3.0 Project Processing

The process for demonstrating project conformance to this plan and obtaining coverage for Quino is described below. These requirements will apply to all projects that are currently subject to MSCP regulations (see the MSCP Subarea Plan Biological Mitigation Ordinance).

3.1 Quino 0% Conservation Areas

Within Quino 0% Conservation Areas (Figures 2 and 3), conservation of Quino or Quino habitat will not be required. However, conservation of viable Occupied Quino Habitat will be encouraged. Where impacts to Occupied Quino Habitat occur, mitigation will be required as described in Section 3.5.

3.2 Quino 100% Conservation Areas

This designation (Figures 2 and 3) pertains to lands within existing MSCP Preserves and certain lands in the Alpine-Jamul QMU that will be preserved as part of this Amendment. No significant impacts to Quino or Quino habitat are anticipated within Quino 100% Conservation Areas. However, compatible preserve uses (e.g., trails, staging areas) as identified in the County Subarea Plan (County of San Diego, 2007) and County of San Diego Multiple Species Conservation Program: Framework Management Plan (County of San Diego, 2001) are anticipated to occur and will not be counted against conservation levels.

3.3 Quino Criteria Areas

If Occupied Quino Habitat within Quino Criteria Areas (Figure 2 and 3) is considered viable, it must be preserved onsite. To make a determination that Occupied Quino Habitat is not viable within a Quino Criteria Area, concurrence from the Wildlife Agencies will be required. If Occupied Quino habitat is deemed unviable, it may be impacted. However, mitigation will be required as described in Section 3.5.

If the Occupied Quino Habitat is considered viable it shall be avoided (and preserved) to the maximum extent practicable, using the following design criteria:

- 1) Projects shall be required to comply with all applicable design criteria in the MSCP Subarea Plan.
- 2) Project development shall be sited in areas that minimize impacts to Occupied Quino Habitat.
- 3) Clustering to the maximum extent permitted by County regulations shall be implemented where necessary as a means of achieving avoidance.
- 4) Notwithstanding the requirements of the Slope Encroachment Regulations contained in the County's Resource Protection Ordinance, projects shall be allowed to utilize a design that may encroach into steep slopes to avoid impacts to habitat.
- 5) The County shall consider reduction in road construction standards to the maximum extent consistent with public safety considerations.
- 6) Where complete avoidance of Occupied Quino Habitat is infeasible, encroachment may be authorized. However, encroachment must not be so great as to render the habitat unviable and may not exceed 20 percent of Occupied Quino Habitat. Further, all impacts must be mitigated as described in Section 3.5. Avoided habitat may not be credited towards attainment of mitigation requirements for Quino, although it can be used to satisfy mitigation requirements for impacts to other habitats.

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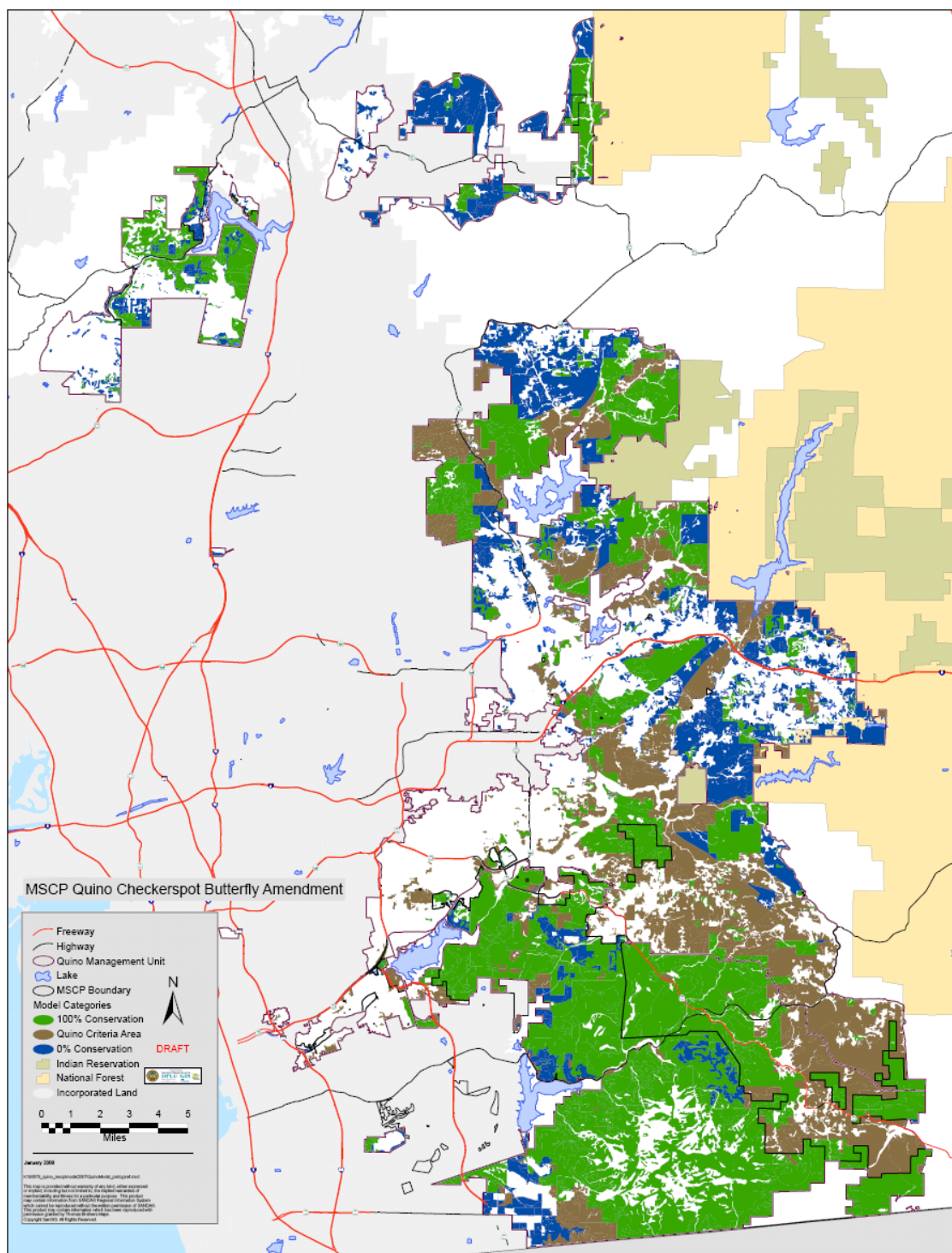


Figure 3. Quino Amendment conservation policies².

² The County is currently working with the Superior Ready Mix Otay Hills Project applicants to determine if this project should be explicitly incorporated into the Quino Amendment. The project may be included in future drafts, which would result in changes to this map.

3.4 Survey Requirements

In order to determine whether impacts to Quino may result from a project, the site must first be assessed to determine if Quino are or could be present. Survey protocols are intended to efficiently identify and map Quino habitat on a project site, with focused Quino surveys required only when warranted. Surveys will be required within the South County, Alpine-Jamul, and San Vicente QMUs (Figure 4).

Exceptions to requirements for performing Quino surveys or habitat assessments may be granted for any of the following reasons:

- Protocol Quino surveys, authorized by the United States Fish and Wildlife Service (USFWS), were conducted on the project site within the prior year and did not detect Quino;
- A general biological survey done within the prior five years indicates the site is composed entirely of unsuitable habitat elements (as listed below), barring any major changes, such as wildland fire;
- Current high-resolution aerial imagery clearly demonstrates a vegetation community composed entirely of closed canopy elements that would not support Quino adults or larvae; or
- A qualified biologist from the County or USFWS has provided written concurrence that the site (or portions of the site) is unsuitable habitat for Quino, as based upon the best available information and current conditions.

For projects not exempt from further surveys, the first and most basic level of survey is the General Quino Habitat Assessment. This assessment is required for properties within the Quino Survey Area (Figure 4). General Quino Habitat Assessments are intended to determine whether focused Quino surveys are necessary and the portions of the property on which focused surveys should be conducted. General Quino Habitat Assessments can be conducted at any time of the year. The following conditions will be considered to represent unsuitable habitat, which is not subject to focused Quino survey requirements:

- Orchards, developed areas, or small in-fill parcels (plots smaller than one acre and completely surrounded by urban development) dominated by non-native vegetation;
- Active/in-use agricultural fields without natural or remnant inclusions of native vegetation (i.e., fields completely devoid of fallow sections, unplowed areas, and/or rocky outcrops);
- Closed canopy* forests, riparian areas, or dense chaparral;
- Dense deergrass meadow; and
- Dense non-native grassland where few host plants are present (host plants are only identifiable during the spring; pockets of native grassland or less dense non-native grassland should be considered Potential Quino Habitat).

* “Closed canopy” describes vegetation in which the upper portions of the trees or shrubs converge (are touching) to the point that the open space between two or more plants does not significantly differ from the open space within a single plant. Dense chaparral is defined here as vegetation so thick that it is inaccessible to humans except by destruction of woody vegetation (“bushwacking”) for at least 100 meters.

The above criteria may be refined based on further research, experiments, or data regarding habitat preferences, without necessitating an amendment to the County Subarea Plan. If potentially suitable habitat is identified during the General Quino Habitat Assessment, a focused Quino survey will be required.

To determine whether Quino are absent from a site, focused Quino surveys shall be conducted in accordance with the most current USFWS survey protocols. However, if Quino are present, then only the minimal amount of survey effort needed to adequately map Occupied Quino Habitat (see definition) will

be required.

The results of all habitat assessments and surveys must be reported to both the County and USFWS. The County and USFWS shall provide feedback regarding these results, as appropriate. The County will determine, in consultation with USFWS, whether a particular year should be considered a non-flight year (i.e., a year when surveys cannot be conducted because Quino are too difficult to observe). If a year is determined to be a non-flight year, the applicant must consult with the County and USFWS to determine whether additional surveys are required or if an adequate impact assessment can be developed in the absence of further surveys.

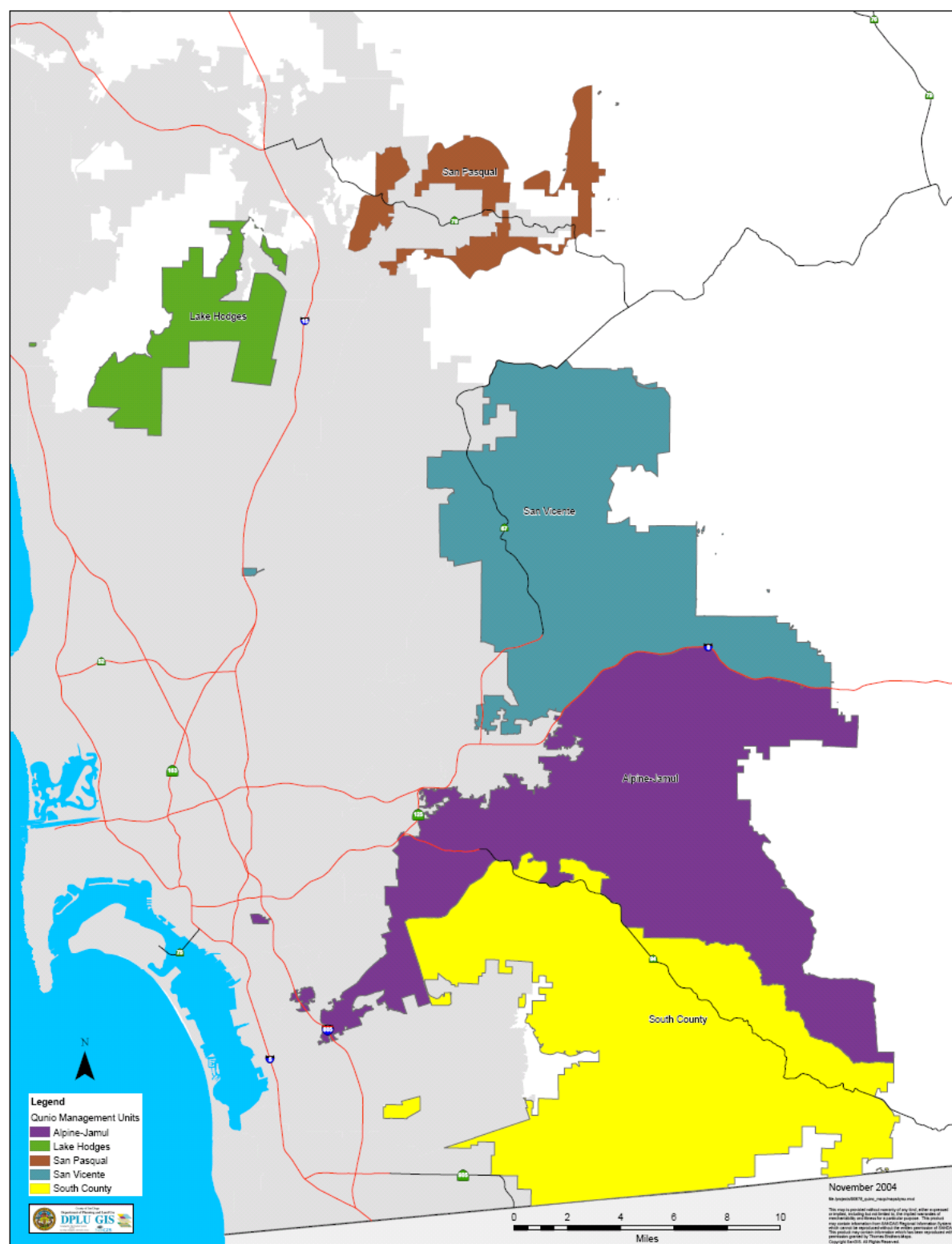


Figure 4. Quino Management Units. The required survey area consists of the San Vicente (blue), Alpine-Jamul (purple), and South County (yellow) QMUs.

3.5 Mitigation Requirements

Where impacts to Occupied Quino Habitat occur, mitigation will be required. In general, mitigation will involve land conservation at a set mitigation ratio (Table 2). However, up to two components of the mitigation ratio may be satisfied by creating Viable Quino Habitat. For example, if one acre of Occupied Quino Habitat is being impacted, then a 4:1 mitigation requirement may be satisfied by conserving two acres of land and creating two acres of Viable Quino Habitat. Proposals to create Viable Quino Habitat must be reviewed and accepted by the County and USFWS to ensure that these projects have a high likelihood of success (i.e., will be utilized by Quino and will remain viable).

Quino habitat creation must result in Viable Quino Habitat within disturbed or agricultural lands less than 0.6 miles from a known Quino population. Additionally, habitat creation must occur on preserved lands and, if possible, within the same QMU as the impacts.

For mitigation, the project applicant must demonstrate a substantial effort to (1) preserve Occupied Quino Habitat and (2) preserve land within the same QMU as the impacts. If the project applicant adequately demonstrates that either of these actions is infeasible, then conservation of Suitable Quino Habitat within 0.6 miles of Occupied Quino Habitat and/or conservation in a different QMU may be allowed. However, increased mitigation will be required (Table 2).

Table 2. Required mitigation ratios for impacts to Occupied Quino Habitat.

	Mitigation Site is in Same QMU as Impacts	Mitigation Site is in Different QMU than Impacts
Mitigation Site Consists of Occupied Quino Habitat	3:1	4:1
Mitigation Site Consists of Suitable Quino Habitat within 0.6 miles of Occupied Quino Habitat	4:1	5:1

4.0 Conservation Analysis

A large core population of Quino will be preserved in the South County QMU. Within other portions of the County Subarea, known Quino populations are smaller; however, there are many unsurveyed areas where Quino are likely to occur. In the San Vicente and Alpine-Jamul QMUs, several known populations of Quino will be preserved along with large areas of Potential Quino Habitat. Although Quino are not expected to occur in the Lake Hodges or San Pasqual QMUs, conservation of substantial Potential Quino Habitat will benefit Quino if the species does in fact occur there now or in the future.

The final MSCP preserve will ensure connectivity between currently known and yet undiscovered populations of Quino. An effective adaptive management program (currently being developed) will ensure Quino persistence within preserves. Overall, implementation of the Quino Amendment will result in conservation of substantial interconnected Quino habitat throughout the County Subarea and will contribute to the regional recovery of Quino.

4.1 Lake Hodges Quino Management Unit

Although 74 percent of the Potential Quino Habitat in the Lake Hodges QMU has been surveyed since 1999, the last known observation of Quino was in 1932. Therefore, Quino are not believed to currently occur within this QMU. Nevertheless, a large proportion of Potential Quino Habitat is or will be preserved (Table 3). Hence, if Quino are present within the Lake Hodges QMU now or in the future, the species will be afforded a high level of conservation that should allow for the long term persistence of the species.

Table 3. Conservation and impacts to Potential Quino Habitat within the Lake Hodges Quino Management Unit

Policy	MSCP Designation	Class B		Class C	
		Total	Conserved	Total	Conserved
Quino 100% Conservation Areas	Hardline Preserve	2,133	2,133	2,704	2,704
Quino 0% Conservation Areas	Pre-Approved Mitigation Area	265	0	2	0
	Major Amendment Area	29	0	21	0
	Minor Amendment Area	229	0	0	N/A
	Santa Fe Valley Open Space II	3	0	0	N/A
	Santa Fe Valley 'D' Designator	225	0	23	0
	Take Authorized Areas	127	0	269	0
	Unincorporated Land in Metro-Lakeside-Jamul Segment	325	0	73	0
Total		3,337	2,133 (64%)	3,091	2,704 (87%)

4.2 San Pasqual Quino Management Unit

There are no historic records of Quino presence within the San Pasqual QMU and recent surveys (covering approximately six percent of the Potential Quino Habitat) have all been negative. As a result, Quino are not believed to currently occur within this QMU, and it is unlikely that Quino will occur there in the future. Nevertheless, a large amount of Potential Quino Habitat is or will be preserved (Table 4). Hence, if Quino are present within the San Pasqual QMU now or in the future, the species will be afforded a level of conservation that should allow for the long term persistence of the species.

Table 4. Conservation and impacts to Potential Quino Habitat within the San Pasqual Quino Management Unit.

Policy	MSCP Designation	Class B		Class C	
		Total	Conserved	Preserve	Conserved
Quino 100% Conservation Areas	Hardline Preserve	2,222	2,222	1	1
Quino 0% Conservation Areas	Pre-Approved Mitigation Area	3,053	0	287	0
	Unincorporated Land in Metro-Lakeside-Jamul Segment	2,025	0	121	0
Total		7,300	2,222 (30%)	409	1 (0.2%)

4.3 San Vicente Quino Management Unit

Approximately 16 percent of the Potential Quino Habitat in the San Vicente QMU has been surveyed and the vast majority of land where Quino are most likely to occur will be preserved (i.e., 95 percent of Class A habitat). Additionally, 62 percent of the unsurveyed Potential Quino Habitat (Class B) will be preserved (Table 5). Where projects have the potential to impact Quino habitat, surveys will be required and the conservation measures described in Section 3 must be followed. The high level of conservation for known Quino populations and Potential Quino Habitat along with an effective adaptive management program (currently being developed), should contribute to Quino recovery in the region.

Table 5. Conservation and impacts to Potential Quino Habitat within the San Vicente Quino Management Unit.

Policy	MSCP Designation	Class A		Class B		Class C	
		Total	Conserved	Total	Conserved	Total	Conserved
Quino 100% Conservation Areas	Hardline Preserve	1,227	1,227	11,880	11,880	1,159	1,159
Quino Criteria Area	Pre-Approved Mitigation Area	197	148	8,905	6,679	973	730
Quino 0% Conservation Areas	Take Authorized Areas	0	N/A	62	0	398	0
	Unincorporated Land in Metro-Lakeside-Jamul Segment	24	0	9,253	0	1,920	0
Total		1,449	1,357 (95%)	30,100	18,559 (62%)	4,451	1,889 (42%)

4.4 Alpine-Jamul Quino Management Unit

There are a number of recent Quino sightings in the Alpine-Jamul QMU, however only five percent of the Potential Quino Habitat has been surveyed. Hence, there is a relatively high level of uncertainty regarding the distribution and abundance of Quino in this QMU. Two known populations of Quino within this QMU will be preserved within Hardline Preserve areas. However, conservation of Quino in this QMU will largely depend upon the avoidance and mitigation measures described in Section 3, and potential conservation of yet undiscovered populations within the Pre-approved Mitigation Area. Additionally, it is likely that some Quino populations within the 0% Conservation Area will be considered viable and that landowners will opt to preserve these populations on site rather than mitigate off site. Overall, the final preserve within the Alpine-Jamul QMU and an effective adaptive management program (currently being developed) should contribute to the recovery of Quino in the region.

Table 6. Conservation and impacts to Potential Quino Habitat within the Alpine-Jamul Quino Management Unit.

Policy	MSCP Designation	Class A		Class B		Class C	
		Total	Conserved	Total	Conserved	Total	Conserved
Quino 100% Conservation Areas	Hardline Preserve	442	442	10,504	10,504	218	218
Quino Criteria Area	Pre-Approved Mitigation Area	203	153	9,231	6,923	359	269
	Minor Amendment Area	1	1	184	138	9	7
	Unincorporated Land in Metro-Lakeside-Jamul Segment	1,069	802	10,066	7,549	248	186
Quino 0% Conservation Areas	Take Authorized Areas	41	0	51	0	N/A	N/A
	Unincorporated Land in Metro-Lakeside-Jamul Segment	241	0	7,211	0	255	0
Total		1,997	1,379 (70%)	37,246	25,114 (67%)	1,088	679 (62%)

4.5 South County Quino Management Unit³

Although only 14 percent of the Potential Quino Habitat in this QMU has been surveyed, 92 percent of the unsurveyed area (Class B) will be preserved. Additionally, 86 percent of the areas where Quino are most likely to occur (Class A) will be preserved (Table 7). Conservation will also be achieved through implementation of the conservation measures described in Section 3. The high level of Quino habitat conservation in conjunction with an effective adaptive management program in the South County QMU (currently being developed) should contribute to Quino recovery in the region.

Table 7. Conservation and impacts to Potential Quino Habitat within the South County Quino Management Unit.

Policy	MSCP Designation	Class A		Class B		Class C	
		Total	Conserved	Total	Conserved	Total	Conserved
Quino 100% Conservation Areas	Hardline Preserve	20,624	20,624	30,155	30,155	962	962
	Otay Ranch Areas Where no Take Permits Will Be Issued	74	74	7	7	0	N/A
Quino Criteria Area	Conserved Subject to Agreement with Wildlife Agencies	11	8	0	N/A	0	N/A
	Major Amendment Area	1,643	1,232	409	307	72	54
	Minor Amendment Area	393	295	204	153	62	47
	Minor Amendment Area Subject to Special Consideration	386	289	0	N/A	23	17
	Pre-Approved Mitigation Area	182	137	257	192	156	117
	Unincorporated Land in Metro-Lakeside-Jamul Segment	2,004	1,503	4,985	3,739	50	37
Quino 0% Conservation Areas	Minor Amendment Area	754	0	200	0	365	0
	Take Authorized Area	1,982	0	1,372	0	254	0
Total		28,053	24,163 (86%)	37,588	34,552 (92%)	1,944	1,234 (63%)

³ The County is currently working with the Superior Ready Mix Otay Hills Project applicants to determine if this project should be explicitly incorporated into the Quino Amendment. The project may be included in future drafts, which would result in changes to the conservation analysis.

References

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